

**Gallatin County Planning Board
Infrastructure Committee
Water and Wastewater Subcommittee
Record of Meeting: June 23, 2008**

Members present: C.B. Dormire (Subcommittee Chair); Gail Richardson; Don Seifert; Sean O’Callaghan, County Planning Department.

Guest: Steve Klotz, Public Works Director, City of Belgrade

1. **Call to Order:** 4:09

2. **Approval of May 19, 2008 Meeting Minutes:** Approved 3:0

Approval of June 9, 2008 Meeting Minutes: Approved 3:0

3. **Discussion with Steve Klotz, Public Works Director, City of Belgrade:**

CB handed out a list of general questions that he suggested Steve Klotz discuss with the group regarding how the Belgrade Public Works Department fits into the picture.

Most properties within City limits are hooked into Belgrade’s municipal systems, there are a few exceptions. People outside of City limits that want City services must annex and pay for the extension of infrastructure. Developers must crunch the numbers to determine if it will pay off to incur the costs associated with annexing and building the associated infrastructure in return for the increase in density that will be allowed with annexation.

Steve briefly discussed the current SID funded work south of I-90, off of Jackrabbit. Some of these properties were already annexed, but the City did not have infrastructure to serve them, the SID remedies this.

Lift stations are problematic because of maintenance. Belgrade’s system is gravity flow, with the exception of four lift stations.

Belgrade’s treatment system is an aerated lagoon and was updated approximately three years ago from a lagoon pond. Steve discussed the difference between a lagoon and an aerated lagoon and said that you get a greater turnover and biological breakdown with an aerated lagoon. Belgrade discharges treated wastewater into groundwater, whereas Bozeman discharges to the East Gallatin River. Next expansion or improvement of plant is anticipated to be when the City of Belgrade reaches a population of approximately 10,500 somewhere around 2019. The population now is approximately 7,500 people. Belgrade would look at utilizing different technology, activated sludge digester, or other system, to treat for nitrates when they are required to do the next upgrade.

Steve described the layout and operations of Belgrade's wastewater treatment plant and groundwater flow directions.

Belgrade is required by EPA to monitor groundwater downstream of infiltration beds, and they do so through a series of monitoring wells and a "control" well which is outside the influence of the infiltration beds. One well is picking up nitrates downstream of one of the infiltration beds

Belgrade is not monitoring for pharmaceuticals in wastewater.

Steve estimates that it will be 10-15 years before sludge buildup becomes a problem with the aerated lagoon. Belgrade adds enzymes that eat sludge and prevent buildup from occurring. Belgrade would have to take their system offline to deal with a sludge buildup. Generally sludge is pumped or dredged into a drying bed and then once dried, is transported to a landfill.

Outside of City limits, in Belgrade's Planning Jurisdiction, most subdivisions are on septic systems that are approved by the County Health Department. Steve is concerned about the cumulative impacts of all these septic systems and concerned that there could actually be more users than on municipal systems.

Belgrade's drinking water comes out of a network of six wells that draw from approximately 150 feet deep. The water is currently pure enough that it doesn't require treatment. They are pretty close to maxing out on their water rights, but they have some reserved. As property annexes into Belgrade, landowners are required to abandon their wells and the associated water rights, or in some cases transfer ownership of water rights to the City of Belgrade.

Belgrade charges sewer rates based on the winter average usage, so landowners aren't charged for sewage treatment based on summer irrigation usage. (Sewer usage isn't metered separately)

Belgrade's wastewater treatment plant will need to be expanded if it is to serve additional growth within Belgrade's Planning Jurisdiction. Amount of expansion is dependent on density of development. Belgrade is planning on any future expansions taking place at the existing treatment site or on adjacent State land, but where expansion takes place ultimately depends on available financing and growth trends at the time the expansion is warranted.

American Public Works Association (APWA) has an online library with useful information, technical information as well as information for the public.

The group discussed with Steve various options for reducing nitrate levels of treated effluent on existing systems. Reverse osmosis is not feasible because you end up with some very clean water and some water with very concentrated levels of nutrients and

other contaminants. Flushing out systems and flushing out treatment areas/filtering soils is another option to reduce nitrate levels and the intent in doing so is to eliminate seasonal peaks. There is a tail-end treatment option that mixes oxygen with the treatment to get nitrogen to come off as a gas. Treating pharmaceuticals is much more difficult and would involve reverse osmosis or higher technology.

Steve talked about irrigating with grey-water and the potential cumulative effect of adding that much nitrogen to the ground surface.

Steve wasn't certain on the amount of effluent that came into Belgrade's wastewater treatment per day. Steve committed to get the group some statistics. (Steve followed through and reported back to the group that the daily inflow at the Belgrade Wastewater Treatment Plant is between 600,000 and 700,000 gallons.)

Belgrade doesn't currently test for site specific contaminants. The biggest problem they have is with grease in the system. A concern was expressed regarding the lack of oversight of waste generated from industrial uses in the County.

When City infrastructure must be extended to accommodate new growth, and a developer is required to extend the infrastructure, Belgrade requires that infrastructure to be sized appropriately to meet anticipated future demands. Belgrade also looks at necessity for easements, etc. to assure future connectivity.

4. Member Reports:

Gail: Emailed Stephanie about training opportunities with Environmental Health and heard back that there probably wouldn't be anything until August.

Don: Will visit with Manhattan and try to get their public works director in for the meeting on July 7th.

CB: Suggested visiting with the City of Bozeman too and is wondering about visiting with the folks in Big Sky.

Don: What about Three Forks?

CB: Yes, doesn't want anyone to feel excluded.

Don: Will try to line up one guest per meeting.

CB: Discussed status of the budget and suggested that the group not worry too much about budget constraints and focus on putting together a high-quality proposal. Once the proposal is together, then the group can focus on finding funding to get the work done.

5. Board Discussion of Further Consulting Engineering Study:

CB: Delay that discussion until next time. Asked group to keep thinking about what needs to be included in the scope of work for the study. Think specifically about how to deal with the “where” component, both for treatment and for infrastructure.

Gail: Concerned about how to be sure the information we get is the right information and the right recommendations.

Sean: Suggested the possibility of having any study peer reviewed.

Don: Could ask a senior level engineering class at the University to look at it.

6. Next Meeting Date and Agenda:

June 7th, representative from the Town of Manhattan, where we want to go next in terms of the engineering study description and future invitees.

7. Other Business:

C.B. will try to get together with Alan English to get a status update on the work that LWQD is doing.

Sean: handed out copies of LC5001 and LC 5009

8. Adjourn: 5:52